

Abstract

A process for manufacturing a steel sheet comprises providing a slug of steel selected from the group consisting of austenitic 301 steel and austenitic 301N steel. The thickness of the slug is reduced by passing the slug through a hot rolling mill while the slug is at a temperature of about 1000°C to about 1200°C, until the slug is formed into a steel sheet. The steel sheet is quenched to lower the temperature of the steel sheet after the steel sheet is hot rolled. The thickness of the steel sheet is further reduced by passing the steel sheet in multiple passes through a cold rolling mill. The steel sheet is reduced in thickness between about 3% and about 13% in the last of its passes through the cold rolling mill.